

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2008

BUDGET ACTIVITY 5 - System Development and Demonstration		PE NUMBER AND TITLE 0604827A - Soldier Systems - Warrior Dem/Val							
COST (In Thousands)	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
Total Program Element (PE) Cost	28227	1589	15790	13901	13901				121269
S56 MOUNTED WARRIOR	1598	1589	15790	13901	13901				46779
S57 LAND WARRIOR	26629								74490

A. Mission Description and Budget Item Justification: This program element is composed of two projects: Project S56 for Mounted Warrior Soldier System (MWSS) and Project S57 for Land Warrior (LW). MWSS provides combat crewmembers and vehicle commanders in the Current and Future force with increased mission effectiveness on the network centric battlefield in the areas of lethality, command and control, communications, survivability, mobility, and sustainability. MWSS provides the dismounted and mounted combat crewmembers increased capabilities to conduct offensive and defensive operations by providing uninterrupted viewing of their platform and dismounted Soldiers. MWSS Helmet Mounted Display extends fire control information to vehicle crewmembers while they are standing up in, or viewing out of the hatch allowing them to maintain immediate situational awareness of their direct battle space, while simultaneously controlling inter-netted fires, vehicle, or dismounted Soldiers. Project S57 supports the LW concept, a first generation, modular, integrated fighting system focused on the needs of the individual infantry Soldier and Soldiers in support of the close fight. An Army Stryker Battalion was equipped with LW and MW for evaluation purposes in FY 2006. The LW and MW systems proved to be highly reliable and provided a significantly increased level of Battle Command Situational Awareness for dismounted forces and mounted crew members. As a result, the Battalion that was conducting the assessment decided to take the systems to war with them in the Spring of 2007.

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2008

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604827A - Soldier Systems - Warrior Dem/Val

<u>B. Program Change Summary</u>	FY 2007	FY 2008	FY 2009
Previous President's Budget (FY 2008/2009)	28826		
Current BES/President's Budget (FY 2009)	28227	1589	15790
Total Adjustments	-599	1589	15790
Congressional Program Reductions		-11	
Congressional Rescissions			
Congressional Increases		1600	
Reprogrammings	212		
SBIR/STTR Transfer	-811		
Adjustments to Budget Years			15790

Change Summary Explanation: Funding - FY 2009 funding increase to support the Mounted Warrior program.

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2008

BUDGET ACTIVITY 5 - System Development and Demonstration		PE NUMBER AND TITLE 0604827A - Soldier Systems - Warrior Dem/Val					PROJECT S56		
COST (In Thousands)	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
S56 MOUNTED WARRIOR	1598	1589	15790	13901	13901				46779

A. Mission Description and Budget Item Justification: Mounted Warrior Soldier System (MWSS) provides combat crew members and vehicle commanders in the Current force with increased mission effectiveness on the network centric battlefield in the areas of lethality, command and control, communications, survivability, mobility, and sustainability. MWSS Helmet Mounted Display extends fire control information to vehicle crewmembers while they are standing up in or viewing out of the hatch allowing them to maintain immediate situational awareness of the their direct battle space, while simultaneously controlling netted fires, vehicle, or dismounted Soldiers. FY06 Congressional plus-up of \$8.2 million and FY07 Congressional plus-up of \$1.644 million funds development of command and control heads up display (see-through, daylight readable, retinal scanning helmet mounted displays). The Mounted Soldier System (MSS) will provide combat vehicle crewmembers and platform commanders with increased mission effectiveness on the network centric battlefield in the areas of command and control, situational awareness, communications, force protection, survivability, mobility, and sustainability. The MSS provides the combat vehicle commander increased capabilities to conduct offensive and defensive operations. The MSS equips Combat Vehicle Crewman/Vehicle Commanders on Heavy Brigade Combat Team (HBCT), Styrker Brigade Combat Team (SBCT) and FCS platforms.

Accomplishments/Planned Program:	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>
FY07: Congressional Plus-up funded development of command and control heads up display (see-through, daylight readable, retinal scanning helmet mounted displays).	1598		
FY08: Congressional Plus-up funds development of optimized M-25 Soldier Fuel Cell System.		1544	
FY09: Developmental engineering, prototyping, manufacturing, and systems engineering, assessment, limited test and evaluation, and program management support for Mounted Soldier System (MSS).			15790
Small Business Innovative Research/Small Business Technology Transfer Program		45	
Total	1598	1589	15790

B. Other Program Funding Summary Not applicable for this item.

C. Acquisition Strategy The MSS acquisition roadmap is comprised of two increments. The MSS Increment I is documented in the MWSS Capability Production Document (CPD) and was fielded to the 4/9 IN BN of the 4th SBCT to maintain tethered voice communciations, tethered access to host platform displays, sensors, and sights via a tethered helmet mounted display (HMD). The MSS Increment II is documented in the MSS Capability Development Document (CDD). Increment II implements a strategy of time-phased requirement implementation driven by technology maturity, vehicle availability, and user prioritization. The acquisition approach is centered around vehicle kit development and integration since the planned MSS subsystems are using relatively mature technology. The MSS program takes advantage of components available from other Government agencies, and Commercial-Off-the-Shelf (COTS) components and technologies as available.

ARMY RDT&E COST ANALYSIS (R3)

February 2008

BUDGET ACTIVITY			PE NUMBER AND TITLE							PROJECT		
5 - System Development and Demonstration			0604827A - Soldier Systems - Warrior Dem/Val							S56		
I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Develop Mounted Warrior Soldier System technologies	CPFF	GDC4S, Scottsdale, AZ	4494								4494	
Develop Command and Control Heads up Display	CPFF	Microvision, Redmond, WA	7919	1309	3Q						9228	
Develop Optimized M-25 Soldier Fuel Cell System	TBD	TBD				1436	2-3Q				1436	
Develop and Engineer Mounted Soldier System	CPFF	TBD, TBD						12498			12498	
Subtotal:			12413	1309		1436		12498			27656	
II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Mounted Warrior Program Soldier System support	OGA, MIPR	Various	270	255	4Q						525	
Mounted Soldier System support	OGA, MIPR	Various				108	2-4Q	500			608	
Subtotal:			270	255		108		500			1133	
III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Various Testing Organizations	OGA, MIPR	ATEC, TTC/YPG/DTC/EPG/ARL-SLAD, etc.	1000					300			300	
Subtotal:			1000					300			300	

ARMY RDT&E COST ANALYSIS (R3)

February 2008

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604827A - Soldier Systems - Warrior Dem/Val

PROJECT
S56

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
PM Soldier Warrior oversight of MSS program	In-House/Task Order	PM Soldier Warrior, Ft. Belvoir, VA						2492			2492	
SBIR/STTR	Withheld			34	1Q	45	1Q				79	
Subtotal:				34		45		2492			2571	
Project Total Cost:			13683	1598		1589		15790			31660	

Schedule Profile (R4 Exhibit)

February 2008

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604827A - Soldier Systems - Warrior Dem/Val

PROJECT
S56

Event Name	FY 07				FY 08				FY 09				FY 10				FY 11				FY 12				FY 13			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Heads-Up Display Development/Fabrication (Congressional Plus-up)																												
Optimized M-25 Soldier Fuel Cell System Development (Congressional Plus-up)																												
MSS Increment I - Deployed with 4/9 IN BN																												
(1) MSS Increment II - Milestone B																												
MSS Increment II - SDD HBCT																												
(2) MSS Increment II - Milestone C																												
MSS Increment II - LRIP HBCT																												
MSS Increment II - Production HBCT																												
MSS Increment II - SDD SBCT																												
MSS Increment II - SDD FCS																												

Schedule Detail (R4a Exhibit)

February 2008

BUDGET ACTIVITY 5 - System Development and Demonstration		PE NUMBER AND TITLE 0604827A - Soldier Systems - Warrior Dem/Val					PROJECT S56	
<u>Schedule Detail</u>	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011</u>	<u>FY 2012</u>	<u>FY 2013</u>	
MWSS Development								
MWSS Initiate Long Leads								
MWSS Limited Testing & Evaluation								
Stryker BN Equipped								
DOTMLPF Assessment								
Heads-Up Display Development/Fabrication (Congressional Plus-up)	2Q - 4Q	1Q - 2Q						
Optimized M-25 Soldier Fuel Cell System Development (Congressional Plus-up)		2Q - 4Q	1Q					
MSS Increment I - Deployed with 4/9 IN BN	3Q - 4Q	1Q - 4Q						
MSS Increment II - Milestone B		1Q						
MSS Increment II - SDD HBCT			1Q - 4Q	1Q - 3Q				
MSS Increment II - Milestone C				4Q				
MSS Increment II - LRIP HBCT				4Q	1Q - 4Q	1Q - 2Q		
MSS Increment II - Production HBCT						3Q - 4Q	1Q - 4Q	
MSS Increment II - SDD SBCT					1Q - 4Q	1Q - 4Q		
MSS Increment II - SDD FCS							2Q - 4Q	